

TOPOFF 2 Exercise Seattle, Washington May 12-14



TOPOFF II, so named for its involvement of top officials, was the largest and most ambitious national security exercise ever conducted in this country. The purpose was to build on TOPOFF I from two years ago and test the nation's ability to respond to a multi-city terrorist attack. The exercise involved a simulated "dirty bomb" in Seattle and a bio incident in Chicago. Because of its national level involvement, many federal agencies participated including FEMA's National Urban Search and Rescue (US&R) Program. As part of the US&R exercise response, several of the Blue Incident Support Team (IST) members participated, simulating the deployment of ESF-9 resources that would have most likely been requested by the city of Seattle. Those attending from the IST cadre were Jim Strickland, Dr. Ken Miller, Don Shawver, Bob McKee, and Rick Roatch. Dave Webb and Pete Smalley from the US&R Division acted as the ESF- 9 Leader and Assistant.

As always, exercises of this type are good learning experiences and this was no exception. Being involved in the Seattle portion provided a great learning tool for the IST, as we had to work

through some of the issues we will have to face on an actual radiological incident. In this scenario, a radiological dispersal bomb containing Cesium-137 and Americium-241 exploded resulting in a building collapse and damaging a number of cars and city buses. Over 140 victims were transported in the first day, but many others remained trapped overnight and into the next day by fallen concrete beams and other structural members.

The IST had several exercise objectives including identifying and exercising interagency coordination, determining appropriate levels of protection, gaining experience operating in a radiological environment, and determining what IST logistical support may be required for such an incident. A secondary benefit realized was co-locating the IST with the National Disaster Medical System's (NDMS) Management Support Team (MST). Since there are many similarities between the NDMS and US&R response teams, there are some economies of scale in combining some of our support functions. Prior to this, US&R's operations on a radiological WMD incident were theoretical and still under development. Now we have at least exercised in a radiological environment and some of the differences between that type of incident and a "normal" building collapse incident (if there is such a thing) became apparent. Among the areas where the IST noted differences that must be addressed on a real radiological incident include:

Incident psychology: Incidents involving radiological material can easily be frightening, even to experienced first responders. There is a mystic about

dealing with radiation, more so than other hazardous materials incidents, most likely because it involves a potential deadly invisible material whose effects have been dramatically documented. Without proper knowledge and training on the material we were dealing with, the psychological effects on the responders could easily disrupt the operation.

The important lessons realized of this exercise are that victims can survive being trapped in a radiological atmosphere for a significant period of time and task forces can operate to rescue them. In fact, the radiation exposure may not be the most harmful aspect of the incident. Traumatic injuries from the explosion can easily do more harm than the exposure. Our personnel will be able to successfully perform search and rescue operations with the proper time, distance, and shielding measures. In other words, radiological incidents can be managed successfully and safely if we follow our training. It is up to the IST and task force management to use their knowledge and experience to determine how this can safely be accomplished.

Operational Timetable: Even though task forces will be able to operate in this hazardous environment, one area of our operations that will most likely have some adjustment will be the timeliness and speed with which task forces go to work. Clearly on this type of incident, expect the IST to be more careful in its assessment and operational planning before committing resources. The difference is that there is much more information to collect and assess on the safety of our personnel than we have

practiced in the past. In lieu of exact readings of radiation types and levels, the IST may lean toward over-precautions until such time as we can obtain reliable information on the material involved. IST leadership will have to rely on the IST Medical, Haz Mat, and Safety positions more than ever for input into the panning process.



The IST must ensure that the ESF- 9 objectives provided by the local incident management team are safe and realistic to achieve. This means ensuring control zones are correctly in place and identified, radiological monitoring has been conducted at necessary locations correctly and analyzed as to its significance, a proper level of PPE has been established, and time and distance requirements are established and understood by all ESF-9 personnel. Rad readings can vary over small distances and counter measures can be taken to reduce the exposure rates to lengthen operational time in the area. Rad monitoring needs to be continuous in areas where debris are being moved and in void spaces while searches are being conducted. In this type of incident the IST will be more apt to double check local findings and even establish secondary sources of information to ensure safety.

Coordination of Agencies: We are used to dealing with large numbers of local, state, and federal agencies, as was the case in New York and the Pentagon, but a WMD radiological incident may top them all. This exercise had a huge number of agencies and organizations involved as might be expected, but probably not all that would respond to an actual incident of this kind. The coordination and sharing of information and work assignments will most likely be greater than we have ever experienced in the past. There are

several NDMS hazardous materials medical teams that we have no prior experience working with, such as the National Medical Response Team-Weapons of Mass Destruction (NMRT-WMD) and the WMD Disaster Mortuary Operational Response Team (WMD-DMORT). Just from this exercise, we were able to anticipate some of the many agencies, organizations, and entities that the IST will have to interact and coordinate with. Depending on the position, expect to interact with the following organizations:

| IST Position | Potential Interactions: |
|--------------------|--|
| Safety Officer | Local incident Safety Officer Local Haz Mat teams Safety FBI Safety Officer Civil Support Team Safety Officer Department of Energy Safety Officer Environmental Protection Agency / U.S. Coast Guard Safety Officer OSHA |
| Medical Officer | Local EMS Metropolitan Medical Response System (MMRS) Civil Support Teams Local Haz Mat teams Disaster Medical Assistance Teams (DMAT) Disaster Mortuary Operational Response Team (DMORT-WMD) National Medical Response Team-Weapons of Mass Destruction Government radiation safety officers and health physicists on site. |
| Haz Mat Specialist | FBI Environmental Protection Agency (EPA) and Coast Guard Local Haz Mat teams National Medical Response Team-Weapons of Mass Destruction Civil Support Team Local law enforcement bomb squads Alcohol, Tobacco, and Fire Arms (ATF) Department of Energy |

The coordination between the IST and these agencies will be daunting. It is not surprising that our operations may go somewhat slower than we are used to in the past to ensure our operational objectives and assignments are coordinated and our protections in place are sufficient.

Personal Protection and Safety: One of the issues the IST has always wrestled with during the first few days of an incident is the correct level of PPE and respiratory protection for our personnel. It has been our norm, although not necessarily correct, to start immediate operations with what we think is the best guess level of protection and then hash it out later with other local, state and federal agencies. In radiological incidents, we must improve on this practice. The protection level should and must be set before task force operations commence and it will allow for a higher margin of safety than we have insisted on before. In anticipating the proper course of action on a known rad incident when the initial assessment is incomplete or not reliable to our standards, expect to initiate our operations minimally with half face APR with P-100/AG/OV cartridges, eye protection, and Tyvek or Nomex clothing. After we have conclusive readings, the level can be raised or lowered accordingly.



Secondarily, the IST must enforce proper decon when our personnel leave the work areas. We have been moderately successful in this area on other incidents, but on this type of incident, the IST must ensure decon facilities are in place before any operations begin and personnel and equipment decon will have to be strictly enforced. This will include minimally, bulk dust hygiene, change of clothing, safety gear and boot decon. Obviously, rad monitoring must be performed at all appropriate locations around the incident site.

Third, on such a WMD incident, it is easy to focus on the specific hazard, in this case radiation, and forget about more traditional safety issues, such as lifting, trip hazards, accumulations of CO from equipment exhaust and a multitude of other hazards. Both IST and Task Force Safety Officers will have much to monitor and our risk/hazard analyses will have to incorporate all potential risks. To be protected successfully from radiation, but become a casualty from another hazard is unacceptable. There may even have to be improvements to IST members' personal safety equipment for radiological and other types of WMD incidents.

While this exercise only provided a short glimpse into how such a mission might play out, it was valuable time invested for those who attended. We now have

some experience to set a benchmark for our operations, albeit still very much in need of expanding. Still, our program is better off for our participation. Hopefully, the US&R program can continue to attend these types of exercises and training forums in the future. Only by doing this can we be ready to meet the obligations and challenges of our future deployment.